

Application No. 10/802,984

REMARKS

Claims 1-21 are pending. By this Amendment, claims 2, 9, and 16 are cancelled and claims 1, 3, 4, 6-8, 10, 11, 13, 15, and 17-20 are amended.

Claim Objections

Claims 8 and 15 have been amended to correct the objections noted by the Examiner.

Claim Rejections Under 35 U.S.C. § 112

Claims 1-7, 9-14 and 16-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 2, 9, and 16 have been cancelled. The remaining claims rejected under § 112 have been amended to correct the noted indefiniteness.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-4 and 7, were rejected under 35 U.S.C. 102(b) as being anticipated by Komuro et al. (U.S. Patent No. 5,851,659). The independent claims have been amended to more clearly point out that the full exterior margin of the piston pin of the piston pin of the present invention is coated. The test piece 13 of the test roller 11 of Komuro is the only portion of the test roller 11 which has a treated surface, as noted at col. 7, lines 49-50. Further, the raised center portion of the test piece of Fig. 3 of Komura would make the test piece unsuitable for a piston pin, the piston pin necessarily having a cylindrical surface of constant diameter in order to facilitate insertion in the pin bores of the piston skirt. In view of the foregoing, it is respectfully requested that the rejection be withdrawn.

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Claims 8 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Lemelson (U.S. Patent No. 4,974,498). Lemelson does not disclose a chromium-nitride coating. Accordingly, it is respectfully requested that the rejection be withdrawn.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Hamada et al. (U.S. Patent No. 6,886,521). In the background section of the Hamada disclosure, it is suggested that the cam lobe and lifter of an engine be coated with chromium nitride. The application then goes on to disclose coating a piston pin, not with chromium nitride, but with a hard carbon film. There is no disclosure of a piston pin coated with chromium nitride. Accordingly, it is respectfully requested that the rejection be withdrawn.

Claim Rejections 35 U.S.C. § 103

Claim 5 as best understood, is rejected under 35 U.S.C. 102(b) as being anticipated by Komuro et al. (U.S. Patent No. 5,851,659). It is believed that this rejection was intended to be a 103(a) rejection and is treated herein as such. Applicant requests correction if this is not correct. The comments relative to Komuro with respect to claim 1 above, from which claim 5 depends, are relevant here. Accordingly, it is respectfully requested that the rejection be withdrawn.

Claims 8-10, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKone (U.S. Patent No. 1,491,155) in view of Kochendorfer et al. (U.S. Patent No. 4,406,558). Both McKone and Kochendorfer disclose a bearing surface on the piston pin. Thus the mating of the piston pin with the pin bore is expressly not bearingless, as recited in claims 8-10, 15, and 16. Since there is no structure, teaching or suggestion in the references of a bearingless mating, it is respectfully requested that the rejection be withdrawn.

Claims 10-12 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKone, in view of Kochendorfer et al., as applied to claims 8-10, 15, and 16, and further in view of Komuro et al.). As noted above, both McKone and Kochendorfer disclose a bearing

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surface on the piston pin. Thus the mating of the piston pin with the pin bore is expressly not bearingless, as recited in claims 8-10, 15, and 16. Also as noted above, the independent claims have been amended to more clearly point out that the full exterior margin of the piston pin of the piston pin of the present invention is coated. The test piece 13 of the test roller 11 of Komuro is the only portion of the test roller 11 which has a treated surface, as noted at col. 7, lines 49-50. Since there is no structure, teaching or suggestion in the references of a bearingless mating or of a fully coated piston pin, it is respectfully requested that the rejection be withdrawn.

Claims 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKone, in view of Kochendorfer et al., and Komuro et al., as applied to claims 10-12 and 17-19, and further in view of Fukutome et al. (U.S. Patent No. 5,601,293). The comments relative to McKone, Kochendorfer et al., and Komuro et al., as applied to claims 10-12 and 17-19 are relevant here. Fukutome et al is directed to coating a piston ring, not a piston pin. It does not follow that a coating that is useful for a piston ring is useful for a piston pin. Since there is no structure, teaching or suggestion in the references of a bearingless mating or of a fully coated piston pin, it is respectfully requested that the rejection be withdrawn.

Claims 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKone, in view of Kochendorfer et al., Komuro et al., and Fukutome et al., as applied to claims 13 and 20 above, and further in view of Wakefield (U.S. Patent No. 3,757,378). The comments relative to McKone, Kochendorfer et al., Komuro et al., and Fukutome et al., as applied to claims 13 and 20 above, are relevant here. Wakefield is directed to a buffing machine. There is no structure, teaching or suggestion in the Wakefield reference that a piston pin could be buffed by the Wakefield device. Accordingly, it is respectfully requested that the rejection be withdrawn.

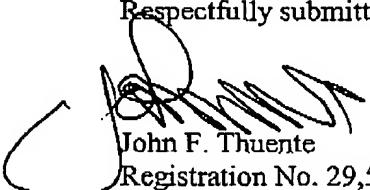
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CONCLUSION

In view of the foregoing, it is submitted that this application is in condition for allowance.
Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would
be useful to advance prosecution.

Respectfully submitted,



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